

AMENDMENTS TO THE CLAIMS

1. (currently amended) A method for processing a signal and a bearer separately in an ALL IP network system including one or more mobile stations, one or more radio networks and one or more core ~~network~~networks, the method comprising the steps of:

a) transmitting a service request message from ~~the a~~ mobile station to ~~the a~~ radio network;

b) at the radio network, determining whether a circuit-related service or a packet-related service is requested;

c) if the circuit-related service is requested:

(i) transmitting a CM service request message to a mobile switching center (MSC) server;

(ii) receiving a service request acknowledgement message from the MSC server; and

(iii) assigning a bearer in response to the service request acknowledgement message; and

e) ~~—~~ d) if the packet-related service is requested,;

(i) transmitting the service request message from the radio network to ~~the a~~ core network without performing any process-processing of the service request message;

d) ~~—~~ (ii) at the core network, performing a process-processing of the service request message and transmitting an assignment request to the radio network, the assignment request requesting that the radio network to assign ~~the a~~ bearer for user data; and

e) ~~—~~ (iii) assigning the bearer in response to the assignment request.

2. (currently amended) The method as recited in claim 1, wherein the radio network includes a radio network control system (RNCS) ~~RNCS~~ and a radio bearer function (RBF) unit, the ~~radio bearer function~~ RBF unit performing bearer assignment.

3. (currently amended) The method as recited in claim 2, wherein the core network includes a ~~mobile switching center (MSC)~~ the MSC server and a session manager, the session manager managing a packet-related message.

4. (currently amended) The method as recited in claim 3, wherein whether the circuit-related service or the packet-related service is requested is determined by reading ~~out an~~ address of a TCP/IP header allocated to each service request message.

5. (original) The method as recited in claim 4, wherein if the address of the TCP/IP header has an address of the session manager, it is determined that the packet-related service is requested.

6. (currently amended) The method as recited in claim 5, wherein the step ~~e)-d)~~ (iii) includes the steps of:

e1) ~~—(A)~~ (A) transmitting a response message related to the service request from the RNCS to the mobile station;

e2) ~~—(B)~~ (B) at the RNCS, requesting that the ~~radio bearer function (RBF)~~ RBF unit to assign the bearer; and

e3) ~~—(C)~~ (C) at the ~~radio bearer function (RBF)~~ RBF unit, assigning the bearer.

7. (currently amended) Computer-readable ~~record~~ recording media storing instructions for performing a method for processing a signal and a bearer separately in an ALL IP network system including one or more mobile stations, one or more radio networks and one or more core networks, the method comprising the steps of:

a) transmitting a service request message from ~~the a~~ mobile station to ~~the a~~ radio network;

b) at the radio network, determining whether a circuit-related service or a packet-related service is requested;

c) if the circuit-related service is requested:

(i) transmitting a CM service request message to a mobile switching center (MSC) server;

(ii) receiving a service request acknowledgement message from the MSC server; and

(iii) assigning a bearer in response to the service request acknowledgement message; and

~~e)~~ d) if the packet-related service is requested;

(i) transmitting the service request message from the radio network to ~~the a~~ core network without performing any process processing of the service request message;

~~d)~~ (ii) at the core network, performing a process processing of the service request message and transmitting an assignment request to the radio network, the assignment request requesting that the radio network to assign ~~the a~~ bearer for user data; and

~~e)~~ (iii) assigning the bearer in response to the assignment request.

8. (currently amended) The computer-readable ~~recording~~ recording media as recited in claim 7, wherein the step ~~e)-d)~~ d)(iii) includes the steps of:

e1) — (A) transmitting a response message related to the service request from ~~the RNCS~~ a radio network control system (RNCS) to the mobile station;

e2) — (B) at the RNCS, requesting ~~the~~ that a radio bearer function (RBF) unit to assign the bearer; and

e3) — (C) at the ~~radio bearer function (RBF)~~ RBF unit, assigning the bearer.